



# C++

## Programming Step-by-Step



Asadullah Shah



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# **C++ PROGRAMMING: STEP BY STEP**

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**Editors**

Asadullah Shah



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## 24. LINEAR SEARCHING

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### Abstract

Linear search is applicable on an unsorted array and one can do binary search for a sorted data. In this chapter you will study two different algorithms for searching, linear and binary search. In linear search an unordered list is used until the item is being looked for. The length of time it takes to look up something using a linear search will depend upon the size of the list. Imagine trying to look up a name in a telephone directory if it was not alphabetically sorted.

### 24.1 Linear Search

It is unlikely that the item you are searching using linear search lie as the first item or last item of the list. Searching through the list you need to make sure to exit the search when the item is found and in case if the list is exhausted, and did not find the item, an error message must be printed out. Suppose you want to search through the names of the month for a particular month and print out its numeric month value (for example, for March print out 3). The program is shown in Figure 24.1.